



DESCRIPTION OF THE "MEDICAL AND VETERINARY BIOCHEMISTRY" STUDY PROGRAMME

Academic unit conducting the study programme	Faculty of Medicine, Department of Biochemistry
State code	6121DX001
Group of study areas	Life Sciences
Field of studies	Biochemistry
Duration of studies	3.5 years
ECTS credits	210
Awarded qualification degree/professional qualification	Bachelor's degree in Life Sciences and professional qualification of a biomedical technologist.
Cycle of studies	First
Aim of the study programme	The study programme aims to prepare enterprising and inovative biochemistry specialists, capable to organize and carry out laboratory tests in the fields of diagnostics of human and animal diseases, environmental monitoring, food and agricultural products as well as raw material control according to the good laboratory practice requirements; having researcher erudition, capable to continue with a master's degree and capable of lifelong learning.
Anticipated results of the study programme	<ol style="list-style-type: none">1. Knowledge. A person who graduated from Medical and Veterinary Biochemistry program (hereinafter MVB) understands and applies knowledge of the hierarchy of molecules in the formation of cellular structures, transfer of genetic information, organization of molecular and cellular processes, systemic relations and their importance in determining normal functions of organisms and their changes in cases of pathologies.2. Research Skills. A person who has completed the MVB program is capable of recognizing and identifying an emerging problem, planning its research strategy based on scientific research methodology, independently collecting, analyzing, and, within their area of competence, interpreting the information obtained from various sources, communicating the results of their research, and applying the principles of good laboratory practice (hereinafter GLP) in their professional activities.



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	<p>3. Specific Skills. A person who has completed the MVB program is capable of safely working with biological and chemical materials, collecting biological samples—including clinical specimens related to healthcare (both human and animal)—preparing and storing them until analysis, performing tests using standard analytical equipment, applying standard laboratory procedures and methodologies, and quantitatively and qualitatively assessing the biological characteristics of the research object, their changes, and interpreting the obtained results within the limits of their competence.</p> <p>4. Social Skills. A person who has completed the MVB program is capable of working independently, in a group, and in an interdisciplinary team to address current medical and veterinary biochemistry problems. They are knowledgeable about bioethical issues related to biochemistry research and adhere to bioethical standards, take responsibility for the quality of their work, follow professional ethics and principles of social responsibility, and are able to articulate their thoughts fluently both verbally and in writing, as well as communicate in a foreign language.</p> <p>5. Personal Skills. A person who has completed the MVB program is capable of independently and responsibly organizing and planning their professional activities and learning process, as well as basing their professional activities on the latest scientific discoveries.</p>
Features of the study program (annotation)	The MVB study programme prepares biochemistry bachelors who possess fundamental knowledge in biochemistry, molecular biology, medicine, and veterinary medicine, and are able to organize and independently carry out biochemical research in the fields of human and animal disease diagnostics, environmental monitoring, food and agricultural product control, and raw materials quality assurance, following GLP principles. The MVB program is the only academic program in Lithuania that provides biochemists with the



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	<p>required education and skills to perform not only broad-scope biochemical research but also specialized research conducted in laboratories serving healthcare institutions, whose activities are regulated by law. Upon completion of the MVB study program, a professional qualification in biomedical technology is obtained</p>
Admission requirements	<p>The first subject – Chemistry – weighting coefficient 0.4. The second subject – Mathematics, or Biology, or Physics, or Information Technology – weighting coefficient 0.2. English – weighting coefficient 0.2.</p>
Professional Career Opportunities	<p>Graduates of the MVB study programme obtain a bachelor's degree in biochemistry and a professional qualification as a biomedical technologist, granting them the right to work in laboratories serving healthcare institutions, whose activities are regulated by legal acts. As broad-profile biochemistry graduates, they can work in various laboratories across different fields, as well as in private-sector biotechnology companies, environmental monitoring laboratories, and laboratories for the control of food, agricultural products, and raw materials.</p>
Student exchange opportunities	<p>All LSMU students have equal opportunities to participate in the international mobility programmes and projects (Erasmus+, etc.) and leave for 3-12 months during the study period to the HEIs, which have signed the inter-institutional agreements with LSMU, in Europe or worldwide, and/or for 2-12 months - for the practical training to the chosen foreign institution.</p>
Further study opportunities	<p>According to the Lithuanian Qualifications Framework, graduates of the MVB study programme obtain a Level 6 qualification and have the opportunity to enroll in second-cycle university study programmes. These include programmes within the life sciences field (all disciplines), health sciences (such as Laboratory Medicine Biologist and Medical Biologist), and technology sciences (such as Medical Chemistry), as well as other programmes</p>



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	<p>that require a first-cycle degree in biochemistry. Upon obtaining a relevant master's degree, graduates can also pursue doctoral studies.</p>
Assessment of study results	<p>The assessment of student achievements is directly linked to learning outcomes, with evaluation principles established in the LSMU Study Regulations and outlined in each course description. A cumulative grading system is applied, where the cumulative component accounts for at least 50% of the final exam grade. A ten-point grading scale is used to assess student knowledge, with the lowest passing grade being five. During the study of a subject/module, assessment methods include colloquiums, practical work defense, tests, coursework, oral presentations, and other forms that contribute to the cumulative grade. Upon completion of a subject/module, the final assessment methods include an exam and an independently completed student project.</p>
Chairperson and Members of the Study Programme Committee	<p>Chairperson: Rasa Baniienė, prof. Dr., Deputy Chairperson: Rūta Budreckienė, doc. Dr. Secretary: Jurgita Šapauskienė, lekt. Members: Laima Ivanovienė, prof. Dr. Vilmantė Borutaitė, prof. Dr. Astra Vitkauskienė, prof. Dr. Julius Liobikas, doc. Dr. Danielius Umbrasas, Dr. asist. Arvydas Strazdauskas, asist. Nojus Meslinas, representative of the student body Arūnas Lagunavičius, Dr., representative of the social partner „ThermoFisher Scientific Baltic“</p>